Engineering Economy

	Find	*From*	*Equation*	*No.*
Single Payment	F	P	$F = P(1+i)^n$	2.2
	P	F	$P = F/(1+i)^n$	2.3
Equal-Payment Series	P	A	$P = A\left[\dfrac{(1+i)^n - 1}{i(1+i)^n}\right]$	2.6
	A	P	$A = P\left[\dfrac{i(1+i)^n}{(1+i)^n - 1}\right]$	2.7
	F	A	$F = A\left[\dfrac{(1+i)^n - 1}{i}\right]$	2.8
	A	F	$A = F\left[\dfrac{i}{(1+i)^n - 1}\right]$	2.9
Gradient Series (arithmetic)	P	G	$\dfrac{G}{i}\left[\dfrac{(1+i)^n - 1}{i(1+i)^n} - \dfrac{n}{(1+i)^n}\right]$	2.15
	A	G	$G\left[\dfrac{1}{i} - \dfrac{n}{(1+i)^n - 1}\right]$	2.17
	F	G	$G\left[\left(\dfrac{1}{i}\right)\left(\dfrac{(1+i)^n - 1}{i} - n\right)\right]$	
Gradient Series (geometric)	P	A_1	$A_1\left[\dfrac{1 - \left(\dfrac{1+g}{1+i}\right)^n}{i-g}\right]$	2.23 $i \neq g$
	P	A_1	$A_1\left[\dfrac{n}{1+\text{i}}\right]$	2.24 $i = g$
Breakeven	Profit = R-(FC+VC) =(r-v)Q-FC			